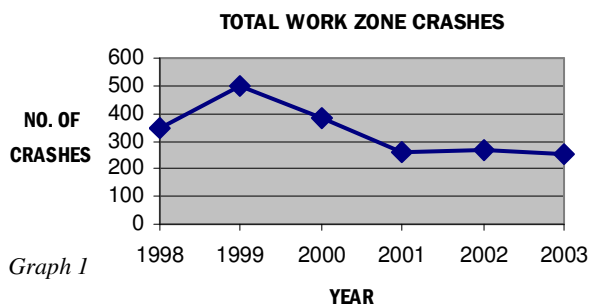


## Preventing Work Zone Crashes

by Michael Johnson, E.I., and Pierre Jomini, P.E.

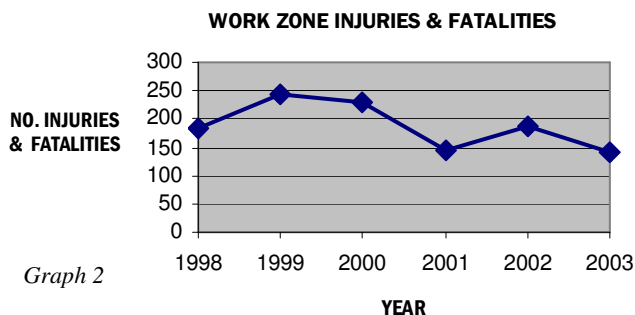
Work zones are a necessary inconvenience for the traveling public. Drivers are subject to reduced speed limits, must occasionally follow detours, and sometimes have to wait at flagger stations or temporary traffic signals. There are also potential dangers and distractions, and road users may encounter unexpected or unusual situations.

Graph 1 shows the number of construction-zone crashes in Montana between 1998 and 2003. Montana Highway Patrol records show that the number of work-zone crashes peaked at 500 in 1999. From 2001 to 2003, the number of crashes has varied little, ranging from 255 to 264.



Graph 1

Graph 2 illustrates the number of persons injured or killed in Montana construction zones from 1998 through 2003. Highway Patrol records show that during this six-year period, the highest number of injuries and fatalities was 245 in 1999. In 2003 it dropped to 149.



Graph 2

The most common reasons for work zone crashes are

- inattentive and careless driving,
- driving too fast for conditions,
- failure to yield, and
- following too close.

The highest number of work zone crashes occur between April and October coinciding with the peak road construction



season. Most occur in the daytime on dry roads and in good weather.

While the Montana Work-Zone Safety Group would like to see zero crashes in work zones, it has set two goals for reducing the number of accidents in Montana work zones:

1. Reduce work zone crashes in 2005 by 20% compared to 2002 crashes.
2. Reduce work zone fatalities and injuries by 30% compared to the 2002 data.

These goals are achievable, but it will take a concerted effort by everyone: drivers, contractors, road workers, flaggers, enforcement personnel, elected officials, the media, and engineers. In recent years, Montana has taken a number of steps to make work zones safer. For example, the Montana Legislature doubled fines in work zones and clarified state laws on construction activities. In addition, media campaigns have urged drivers to slow down in work zones. The state also developed a flagger certification program with the help of the Local Technical Assistance Program at Montana State University.

Construction workers should keep in mind that, while they have an important job to do, they must ensure their own safety, the safety of the public, and the safety of their coworkers.

Motorcyclists should pay close attention in work zones as pavement conditions may be rough.

Drivers should observe the following safety tips when entering a work zone:

- Stay alert – dedicate your full attention to the roadway.
- Follow and obey traffic control devices.
- Keep a safe distance from the car ahead.
- Avoid distractions in the vehicle.

Above all, drive defensively at all times. With everyone's support we can make work zones a safer place to work and drive.

# Montana Celebrates Empire Builder Milestone

On June 12, residents along Montana's Hi-Line joined state officials and Amtrak President David Gunn to celebrate the 75th anniversary of the Empire Builder. Lt. Governor Karl Ohs greeted the train in Havre where Mark Simonich, state commerce director, and Betsy Baumgart, administrator of the state tourism office, also welcomed the train. Celebrations were held at Havre, Shelby, and Whitefish as well as at other stops in states the Empire Builder passes through.

"People have been turning out all along the line, even at spots where we don't stop," Amtrak spokesman Marc Magliari said. "It's very gratifying to us and our employees who work 12 months a year to deliver this service." About 100 people took part in the Havre celebration, he said.

Jerry Smith of Galata said about 50 people were at the depot in Shelby. Smith is chairman of a grassroots group called "Save Amtrak," which helped restart daily passenger train service on the Hi-Line in 1995. He said local residents worked hard to organize the celebrations along the route. "We had a great time," Smith said. "It was a community effort in each town."

"The Empire Builder is an essential public transportation connection across the upper United States," said Amtrak President and CEO David Gunn. "We are the steward of three-quarters of a century of reliable passenger train service to an otherwise isolated area of the nation."

Information booths and historical displays were staffed by Great Northern Railway Historical Society members at stations in Havre, Shelby, East Glacier, West Glacier, and Whitefish.

The Empire Builder was inaugurated with much fanfare by the Great Northern Railway (GN) in 1929 and has been providing vital transcontinental service since June 10, 1929. The train still carries the nickname of James J. Hill, a Canadian who was dubbed "Empire Builder" for building the GN.

The first eastbound Empire Builder departed Seattle on June 11, 1929.

The BNSF route is far from any interstate highways, and air service and motor coach options are limited. A recent study performed for the state of Montana determined the Empire Builder has a total economic impact of nearly \$14 million to the state, brings in at least \$5 million tourist dollars a year, provides good-paying jobs, and reduces highway maintenance.

State Commerce Director Simonich said that with passenger rail service facing uncertain funding, the state wants to show its support. Amtrak has always been important to Montana, he added, both for travel within the state and to bring tourists in. "We thought the 75th anniversary was a good place to show our support," Simonich said.

For more information, please contact Tom Steyaert at 444-7646 or [tsteyaert@state.mt.us](mailto:tsteyaert@state.mt.us).



*The Empire Builder pulls into Havre on Saturday, June 12.*

*Photo by Amber Rose D'Hooge/Havre Daily News*

## MDT Improves Lookout Pass Rest Area

Beginning this summer, motorists traveling over Lookout Pass on Interstate 90 west of Saint Regis will benefit from one of Montana's most modern and attractive rest areas.

The new structures at Dena Mora are the latest example of MDT's efforts to improve Montana's rest areas in response to public input and the recommendations of the 1999 Montana Rest Area Plan. These efforts have resulted in new or rebuilt rest areas at Sweet Grass, Lost Trail Pass, Bozeman, and Lolo Pass with several more under design or construction.

The interiors of the new rest area buildings feature individual, private restrooms and a large well-lit lobby area. The attractive exteriors are designed to resemble older mining-era structures along the busy Interstate 90 corridor between Wallace, Idaho, and Saint Regis. Although the Dena Mora project marks the first use of this design in Montana, MDT is using a modified version of the same design for the rest area under construction near Mosby on Montana Highway 200. The Dena Mora design is the third prototype design MDT has developed since 1999 to provide visitors and residents with safe, clean, and modern rest areas that fit in with their surroundings.

The prime contractor for the Dena Mora project was Bodell Construction of Missoula.

For more information on Montana's rest area program contact Kristine Christensen at 444-9240 or [krchristensen@state.mt.us](mailto:krchristensen@state.mt.us) or Larry Murolo at 444-6163 or [lmurolo@state.mt.us](mailto:lmurolo@state.mt.us).





# Milk River Bridge Rebuilt

November 18, 2003



*An accident destroys the Milk River Bridge.*

April 7, 2004



*Cranes set a girder on the new bridge.*

June 5, 2004



*Traffic resumes on the new bridge.*

U.S. Highway 2 provides a critical transportation lifeline to residents and communities along Montana's Hi-Line. As part of the National Highway System, US 2 is also a key part of the regional and national transportation system. That is why federal, state, and local officials and Montana's contracting community responded quickly when an accident destroyed a bridge and closed US 2 on the morning of November 18, 2003. The resulting effort demonstrates how government agencies and the private sector respond to emergencies that threaten Montana's critical transportation system.

Within minutes after the collision between two trucks destroyed the bridge five miles west of Chinook, representatives from MDT, the Montana Highway Patrol, the Blaine County Sheriff's Department, and the Chinook Volunteer Fire Department were on the scene to assess the damage and direct traffic. The most immediate need was to establish an 8-mile long detour on county roads to keep traffic moving through the area. MDT also contacted the Federal Highway Administration (FHWA) to seek federal emergency funds to pay for replacement of the bridge and began the process to hire a contractor to build a temporary replacement bridge that would eliminate the need for the time-consuming detour.

On November 24, using an expedited contract bidding procedure, MDT awarded the contract to construct the temporary replacement bridge to Tamietti Construction. Using two construction crews working two shifts every day except for Thanksgiving, the Great Falls company completed the project ahead of schedule. Thanks to the remarkable effort by Tamietti Construction and its paving subcontractor, Baltrusch Construction, MDT was able to open the temporary bridge on December 4, a little over two weeks after the accident.

Although the temporary bridge allowed traffic to return to US 2 and avoid the lengthy detour, MDT was also working on

the process necessary to design and construct a permanent replacement bridge. Again, Montana companies were instrumental in making this process a success. MDT began by contracting with Morrison-Maierle, Inc., of Helena to design the new bridge. Although the project required a major new bridge and approaches on a new alignment just south of the old bridge, Morrison-Maierle completed the design in less than a month.

Once the plans were complete, MDT again used a streamlined contracting process to hire a contractor to build the new bridge and approaches. Due to the importance of completing the project quickly, MDT considered time as well as cost in evaluating the bids. Following an abbreviated selection process, Riverside Contracting Inc. of Missoula won the construction contract and began work on March 8. With the help of a number of subcontractors, including several Montana firms, Riverside completed the project the week of June 14, well ahead of schedule and only eight months after the original accident.

In addition to the work of MDT and FHWA staff, several other federal and state agencies helped make the Milk River Bridge Project a success. Throughout the project, federal and state agencies expedited their normal permitting and review processes to reduce potential delays.

The November 18 accident that destroyed the Milk River Bridge could have caused significant problems for highway users and the economy of area communities. However, thanks to quick action and hard work by government officials and Montana businesses, the accident provided opportunities for area businesses and demonstrated how agencies and businesses can work together during emergencies. Although MDT is proud of its role, the project was truly a team effort involving numerous agencies and companies and hundreds of Montana workers.

For more information on the Milk River Bridge Project, contact Mick Johnson at 454-5887 or [mijohnson@state.mt.us](mailto:mijohnson@state.mt.us).

## **The following companies and agencies participated in the Milk River Bridge Project:**

- Tamietti Construction
- Baltrusch Construction
- Morrison-Maierle
- Riverside Contracting
- A-Core
- Arrow Striping & Manufacturing
- Evergreen Cassions
- Hot Springs Fence
- Omo Construction
- Prairie Hydroseeding
- Rocky Mountain Rebar
- United Rentals
- Montana Department of Transportation
- Montana Highway Patrol
- Blaine County Commission
- Blaine County Road Department
- Blaine County Sheriff
- Chinook Volunteer Fire Department
- Federal Highway Administration
- Environmental Protection Agency
- U.S. Army Corps of Engineers
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife & Parks

# Transit Tales

## Transportation Commission Approves Buses for Local Communities

MDT's Transit Capital Assistance Program provides much-needed vans and buses to local transportation providers in communities across Montana. The vehicles provide essential life-line transportation for senior citizens, people with disabilities, and the general public.

At its June 3 meeting, the Montana Transportation Commission approved the purchase of 23 vehicles for the following agencies and communities:

### Section 5310

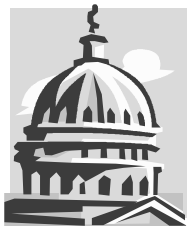
HRDC/Galavan .....	Bozeman
Liberty County Council On Aging .....	Chester
Confederated Salish & Kootenai Tribes .....	Pablo
City of Dillon .....	Dillon
Butte Silver Bow Council On Aging .....	Butte
Reach Inc. ....	Bozeman
AWARE Inc. ....	Anaconda
Eastern Montana Industries .....	Miles City

Mission Mountain Enterprises Inc. ....	Ronan
Opportunity Resources Inc. ....	Missoula
MET Transit.....	Billings
Missoula Developmental Service Corporation .....	Missoula
Park County Senior Citizens/Angeline .....	Livingston
St. Vincent Healthcare Foundation .....	Billings

### Section 5311

Butte-Silver Bow Transit "The Bus" .....	Butte
Helena Area Transit Service "HATS" .....	Helena
Valley County Transit.....	Glasgow
Bitterroot Bus.....	Hamilton
Eagle Transit.....	Kalispell

The next edition of Newline will include information about the timeline for next year's Capital Assistance Program. For more information on the program contact Patrick Sanders at 444-4265 or [psanders@state.mt.us](mailto:psanders@state.mt.us).



## Highway Program Reauthorization Update

Congress has extended the TEA-21 program through the end of July. While further extensions are possible before the final package is finalized, the House and Senate have formed a conference committee to work out differences between their two bills. Conference committees are made up of select members who are charged with developing final legislation that will pass muster on the floors of the Senate and House. In a promising development, Montana will have a member in the conference from both the Senate and House. Senator Baucus, Ranking Member of the Senate Finance Committee, along with Congressman Rehberg on the Transportation and Infrastructure Committee will both be protecting Montana's interests in this critical forum. Best wishes to Senator Baucus and Congressman Rehberg.

## Western Transportation Officials Gather in Kalispell



From July 19 through 21, all roads and modes lead to Kalispell as transportation officials from 18 western states gather for the 2004 meeting of the Western Association of State Highway and Transportation Officials (WASHTO).

The conference will focus on sharing information in the following areas:

- Innovation in transportation programs
- Enhancing transportation safety
- Team building

Highlights of the conference include a tour of the US 93 Presidential High Priority Project and a safety session where ten states will share information on how they have made a difference in their highway traffic safety programs. For more information, visit the Web site at [www.washto2004.org](http://www.washto2004.org) or contact Bill Cloud at 444-6114 or [bcloud@state.mt.us](mailto:bcloud@state.mt.us).

## Montana Transit Association Wins National Award

The Montana Transit Association (MTA) recently received recognition as the State Association of the Year at the 2004 annual meeting of the Community Transportation Association of America in Seattle.

The award recognized MTA's efforts to support and improve Montana transit services. These efforts included support

of federal and state transit legislation, the development of coordination software, and the sponsorship of several new training programs for transit providers.

For more information about the award and MTA, call 523-4944.

## Before & After

Each year, MDT builds dozens of construction projects that preserve or enhance Montana's highway system. Many of these projects result in dramatic changes in the appearance of highways and streets.

Beginning with this issue of *Newsline*, MDT will publish before-and-after photographs of some of these projects. This issue highlights several projects in Montana's cities. Future issues will focus on projects in rural areas.

### North Main Street — Helena

Scope of Work: Widen narrow two-lane street, replace two bridges, add pedestrian and bicyclist accommodations

Primary Contractor: Helena Sand & Gravel



*Before*



*After*

### Main Street — Boulder

Scope of Work: Widen two-lane street, add sidewalks and medians

Primary Contractor: Helena Sand & Gravel



*Before*



*After*

### 6th Street NW — Great Falls

Scope of Work: Widen two-lane streets, add sidewalks and medians

Primary Contractor: United Materials



*Before*



*After*





# What in the World is a Plan, Feasibility Study, Corridor Study, Program?

The work of transportation professionals involves a variety of planning, evaluation, and implementation

tools. Four of these tools are plans, feasibility studies, corridor studies, and programs. Describing the purpose of one versus the other to decision and policy makers, constituents, and others who are not involved in the day-to-day activities can be a challenge. Each tool is unique and serves a different purpose; however, active public participation is an essential element of all plans, studies, and programs.

So, just what exactly is a "plan," "feasibility study," "corridor study," and "program"?

## **Transportation Plan = Here's what we'd like to do.**

Transportation plans establish an agency's future vision, policy direction, and/or wish list of improvements. The intent of these plans is to guide improvements and spending in an area over the long term, typically 20 years. Plans can be policy-oriented, project-oriented, or a combination of both. For instance, TranPlan 21, MDT's statewide plan, is a policy-oriented document. TranPlan 21 contains goals and actions for guiding development and management of Montana's transportation system based on future transportation concerns and customer priorities. On the other hand, several Montana urban areas have project-oriented plans that not only identify overall goals, but also recommended improvements to the various transportation modes. These plans describe the existing system, assess future transportation issues and demand, articulate regional land-use and development patterns, forecast housing and employment growth, analyze alternative improvements and investment scenarios, and recommend specific projects and potential funding for preserving and improving the transportation system. In essence, a transportation plan reflects the direction an area would like to go with its transportation system over both the short and long term.

## **Feasibility Study = Can we even do this?**

A feasibility study is an evaluation tool intended to assess the potential scope, scale, and character of a proposed improvement. This type of study determines the extent of work required to address a problem and evaluates the cost and benefits. A feasibility study does not necessarily propose a solution but answers the question, "Is a project feasible from a technical and financial perspective?" These studies can be done quickly and inexpensively to determine whether further investment is affordable or worthwhile.

A current example of a feasibility study is the Daly Street feasibility study in Butte. Both MDT and Butte expect this

study will provide needed information about improvement options.

## **Corridor Study = How and to what level can we do this?**

A corridor study is a planning and evaluation tool that looks at the existing transportation system within and along a specific corridor and at how the system could be improved to meet the existing and long-term needs. This tool provides a process for analyzing, determining, prioritizing, and staging reconstruction projects and is primarily driven by the need to rebuild old highways or improve capacity. The process takes into consideration planning, engineering, environmental, social, economic, and financial issues. It provides a means for facilitating resolution of major issues before specific project programming and development begin. These studies are intended to save money by identifying long-range right-of-way needs and anticipating potential problems resulting from growth before solutions become too expensive. The end product is a comprehensive package of strategies and improvements that are designed to achieve the goals for the corridor.

## **Transportation Program = This is what we're doing with our current resources.**

A transportation program is an implementation tool that identifies a package of transportation projects and strategies drawn from the recommendations or policies contained in an agency's transportation plan. A program is not a wish list. It is realistic in terms of available funding. A transportation program identifies projects to be implemented over the short term, typically three years, along with associated costs and funding commitments. It illustrates how limited transportation resources are being allocated to projects based on a clear set of short-term priorities. Programs are useful management tools to gauge progress toward implementing transportation plans.

In Montana, MDT develops a Statewide Transportation Improvement Program (STIP), and Montana's three Metropolitan Planning Organizations (MPOs) develop Transportation Improvement Programs (TIPs).

Each of these tools serves a unique purpose in effectively developing and managing the transportation system within existing funding constraints. So, next time you're wondering how to go about tackling a specific issue, you may be better able to distinguish whether a plan, feasibility study, corridor study, or program is the appropriate tool.

For more information, contact Lynn Zanto at 444-3445 or [lzanto@state.mt.us](mailto:lzanto@state.mt.us).

# A Tabloid History of Montana

## Part 2

*Our tabloid history of the Big Sky State continues through the era of the fur traders, gold camps, and vigilantes. Former Montana Highway Department Engineer Bob Fletcher wrote this*

*by Bob Fletcher*

The British fur trade had been an important industry in Canada since the founding of "The Governor and Company of Adventurers of England trading into Hudson Bay" in 1670. The Americans did little towards developing a fur business until Lewis and Clark brought back reports of beaver streams in our recently acquired western territory. Then it didn't take long for ambitious business men to finance brigades of trappers and send them out to the mountain country. Beaver pelves or pelts were in demand. Muskrats weren't masquerading as Hudson seal in those days, and you could wear a fur collar without some tom-cat embarrassing you by recognizing a missing relative. St. Louis became the emporium for the American fur trade of the west. Trade goods were sent out by keel boat, laboriously cordelled and poled up the Missouri River.

The trappers, or mountain men as they were called, blithely roamed the valleys and mountains of Montana, dodging hostile Indians, exploring new territory and gathering gorgeous adventures.

They didn't savvy radio beams, beacons and travel bureaus, but they knew their way around. A road map would have bewildered them, but they could draw a chart on buckskin with a piece of burnt stick that would get you places. They found the passes that our highways now use.

The fur days of our west covered the period from 1807 to 1843. Those years are packed with heroic tales and the material from which sagas are made. The advent of the silk hat lowered beaver prices and to this day you are taking chances to wear one in the west. Destructive competition in the American trade had given no thought to conservation. Streams became trapped out and when the Oregon Trail opened as a highway for emigrants, the remnant of the doughty mountain men became guides and hunters for the caravans. This left most of Montana to the Indians and buffalo for awhile.

With the discovery of gold in California the days of '49 attracted a new generation of adventurers. Traffic increased on the Oregon Trail. The prairie schooners depended mainly on ox teams for motive power. The range was soon grazed off along the route. Poorly fed, hard worked steers played out and had to be abandoned. From western Montana a little group of former

*lively and colorful account for the Montana Highway Commission back in 1937. Although Bob passed away in 1972 at the age of 87, his unique view of Montana history is timeless.*

Hudson Bay men went south to the emigrant trail and began picking up strays. All the worn down cattle needed was rest and a chance to eat. The Montanans trailed small bunches up to the quiet grass valleys of the Beaverhead and Deer Lodge where buffalo had grown fat on the nutritious native grasses for centuries. In a few months the cattle could be taken back to the Oregon Trail and traded to eager pilgrims one for two.

In 1858 there was a backwash of prospectors from the California diggings. A few of these men fortuitously joined the camps of the cattle traders in Western Montana. They heard that a mixed blood Indian named "Benetsee" Finlay had found colors in a tributary of the Clark Fork River. They verified the report and although they didn't find gold in paying quantities there was enough to convince them that western Montana was a good field to prospect.

In time this news reached the outside world. Placer mining had a get-rich-quick aspect that was alluring to yeomen and gentry as well as rogues and reprobates. In July, 1862, John White made Montana's first pay discovery on Grasshopper Creek and the camp of Bannack came into existence. May 26, 1864, Montana became a Territory with Bannack as its capital.

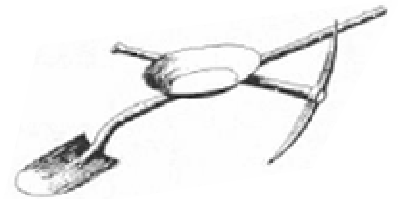
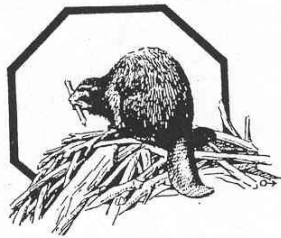
In 1863 the richer ground in Alder Gulch was located.

Most of Bannack's popula-

tion moved to the new camps and in 1865 Bannack yielded the capital laurels to the more virile Virginia City, which in turn passed them on to Helena, a newer camp that grew around the diggings in Last Chance Gulch.

These and other sensational discoveries brought the usual stampedes. Greenhorns and gamblers, merchants and miners, pilgrims and parasites, swarmed in by stage coach, saddle horse and covered wagon. It wasn't long before the lawless were in evidence. Stage coaches were held up, hard working miners were relieved of their dust and nuggets, men were found shot to death. In self-protection the Vigilantes were organized and once started, they did a very thorough job. Trees began bearing strange fruit with a tough rind. A few informal hangings improved the moral tone considerably. The ringleader of the road agents turned out to be the duly elected sheriff. The Vigilantes stretched him and it proved fatal.

*To be continued . . .*



## Missouri River Ferryboat Dedication

Three new Missouri River ferryboats will be dedicated at the McClelland Ferry Crossing on August 4. Montana's congressional delegation has been invited, and currently Congressman Rehberg, MDT Director Dave Galt, and county commissioners from Blaine, Fergus, and Chouteau Counties are expected to attend. The ceremony begins at 10:00 a.m. McClelland is located 15 miles north of Winifred.

The new boats, built by Rehbein Transport, Inc., of Plains, will replace the aging ferries which have traveled back and forth across the Missouri for 60 years. In addition to McClelland, ferries also operate at Carter and Virgelle.

The public is invited to attend. For more information contact Wayne Noem at 444-6109 or Mick Johnson at 454-5887.

## Rail, Transit & Planning Contact Numbers

Only the most frequently requested numbers are listed here. For an area or person not listed, call 800-714-7296 (in Montana only) or 406-444-3423. The TTY number is 406-444-7696 or 800-335-7592.

Administrator (Sandra Straehl).....	444-7692
.....sstraehl@state.mt.us	
Bike/Pedestrian (Carol Strizich).....	444-9273
.....cstrizich@state.mt.us	
Map Orders (Karen Horne-Smith).....	444-6119
.....kahorne@state.mt.us	
Multimodal Planning (Dick Turner).....	444-7289
.....dturner@state.mt.us	
Projects (Gary Larson).....	444-6110
.....glarson@state.mt.us	
Secondary Roads (Wayne Noem).....	444-6109
.....wnoem@state.mt.us	
Road Data & Mapping (Zia Kazimi).....	444-6111
.....zkazimi@state.mt.us	
Traffic Data (Dan Bisom).....	444-6122
.....dbisom@state.mt.us	
Transit .....	444-7289
.....dturner@state.mt.us	
Statewide & Urban Planning (Lynn Zanto).....	444-3445
.....lzanto@state.mt.us	
Newsline Editor (Dawn McCallum).....	444-6115
.....dmccallum@state.mt.us	

*Newsline is a quarterly publication of the Rail, Transit and Planning Division, Montana Department of Transportation.*

6,706 copies of this public document were published at an estimated cost of 41¢ per copy for a total of \$2,759 which includes \$984 for printing and \$1,775 for distribution. Alternative accessible formats of this document will be provided upon request. For further information call (406)444-6331. The TTY number is (406)444-7696 or (800)335-7592.

*MDT's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.*

### Rail, Transit & Planning Division Montana Department of Transportation

2701 Prospect Avenue  
P.O. Box 201001  
Helena, Montana 59620-1001  
800-714-7296



Pre Sort Standard  
U.S. Postage  
**PAID**  
Helena, MT  
Permit No. 141